



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| | | | | |
|---|-------------|---------------------------|---------------------|------------------|
| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
| 09/830,447 | 04/27/2001 | Peter James Duffett-Smith | 41253 | 7010 |
| 7590 | 05/03/2007 | EXAMINER | | |
| Roylance Abrams Berdo & Goodman 1300 19th Street, N.W. Suite 600 Washington, DC 20036-2680 | | | RAMPURIA, SHARAD K | |
| ART UNIT | | PAPER NUMBER | | |
| 2617 | | | | |
| MAIL DATE | | DELIVERY MODE | | |
| 05/03/2007 | | PAPER | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | |
|------------------------------|-----------------|----------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 09/830,447 | DUFFETT-SMITH ET AL. |
| | Examiner | Art Unit |
| | Sharad Rampuria | 2617 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 06 February 2007.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-15 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____.
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application
- 6) Other: _____.

DETAILED ACTION

I. The Art Unit location of this application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2617.

II. The current office-action is in response to the Amendment - After Non-Final Rejection filed on 02/06/2007.

Accordingly, Claims 1-15 are imminent for further assessment as follows:

Claim Rejections - 35 USC § 103

III. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kelley et al.** [US 5,689,270] in view of DUFFETT-SMITH, PETER [WO009711384A1].

Regarding claim 1, Kelley disclosed A method of generating a list of offsets in time, phase, frequency, or derivatives thereof, or their equivalents expressed as offsets in distance or derivatives thereof, of a plurality of transmission source signals, received at a given location, relative to a common reference (abstract), the method comprising;

(b) combining the acquired data and calculating the list of offsets relative to the common reference. (col.18; 29-47)

Kelley doesn't teach specifically, acquiring data from plural receivers, the positions of which may be known or determined, the data from a receiver comprising offsets in time, phase, frequency, or derivatives thereof, respectively of signals received from the transmission sources relative to a reference source in each receiver or to each other. However, DUFFETT teaches in an analogous art, that acquiring data from plural receivers, the positions of which may be known or determined, the data from a receiver comprising offsets in time, phase, frequency, or derivatives thereof, respectively of signals received from the transmission sources relative to a reference source in each receiver or to each other (Pg.11; 10-31). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify **Kelley** including acquiring data from plural receivers, the positions of which may be known or determined, the data from a receiver comprising offsets in time, phase, frequency, or derivatives thereof, respectively of signals received from the transmission sources relative to a reference source in

each receiver or to each other in order to provide a position determining system, for receiving broad band signals transmitted by a number of transmission sources equal at least to the number of dimensions in which the movement of a roving object is to be monitored.

Regarding claim 2, Kelley disclosed A method of generating a list of offsets in time, phase, frequency, or derivatives thereof, or their equivalents expressed as offsets in distance or derivatives thereof, of a plurality of transmission source signals, received at a given location, relative to a common reference (abstract), the method comprising

- (b) determining from the acquired data the offsets in time, phase, frequency, or derivatives thereof, respectively of signals received from the transmission sources relative to a reference source or to each other; (col.18; 9-28, col.13; 16-38, col.14; 54-67) and
- (c) combining the offsets so determined and calculating the list of offsets relative to the common reference. (col.18; 29-47)

Kelley doesn't teach specifically, acquiring data from plural receivers, the positions of which may be known or determined, the data from a receiver being representative of the received signals. However, DUFFETT teaches in an analogous art, that acquiring data from plural receivers, the positions of which may be known or determined, the data from a receiver being representative of the received signals (Pg.11; 10-31).

Regarding claim 3, Kelley disclosed A radio positioning method for determining the position of one or more receivers the positions of which are unknown, which method includes the method of claim 1 or claim 2. (120-1 thru120-3; fig.1; col.4; 56-65)

Regarding claim 4, Kelley disclosed A radio positioning method according to claim 3, wherein the common reference comprises an external reference. (external time reference; col.17; 40-50)

Regarding claim 5, Kelley disclosed A radio positioning method according to claim 4, wherein the common reference comprises a GPS signal. (GPS; col.17; 40-50)

Regarding claim 6, Kelley disclosed A radio positioning method according to claim 3, wherein the step of acquiring data from said plural receivers includes instigating acquisition of said data from a common location. (CPU; col.18; 29-47)

Regarding claim 7, Kelley disclosed A radio positioning method according to claim 3, wherein the step of acquiring data from said plural receivers includes instigating acquisition of said data from each said receiver at times determined by each said receiver. (col.18; 29-47)

Regarding claim 8, Kelley disclosed Apparatus for generating a list of offsets in time, phase, frequency, or derivatives thereof, or their equivalents expressed as offsets in distance or derivatives thereof, of a plurality of transmission source signals, received at a given location, relative to a common reference (abstract), the apparatus comprising;
(b) means for combining the acquired data and calculating the list of offsets relative to the common reference. (col.18; 29-47)

Kelley doesn't teach specifically, means for acquiring data from plural receivers, the positions of which may be known or determined, the data from a receiver comprising offsets in time, phase, frequency, or derivatives thereof, respectively of signals received from the transmission sources relative to a reference source in each receiver or to each other. However, DUFFETT teaches in an analogous art, that means for acquiring data from plural receivers, the positions of which may be known or determined, the data from a receiver comprising offsets in time, phase, frequency, or derivatives thereof, respectively of signals received from the transmission sources relative to a reference source in each receiver or to each other (Pg.11; 10-31).

Regarding claim 9, Kelley disclosed Apparatus for generating a list of offsets in time, phase, frequency, or derivatives thereof, or their equivalents expressed as offsets in distance or derivatives thereof, of a plurality of transmission source signals, received at a given location, relative to a common reference (abstract), the method comprising;

(b) means for determining from the acquired data the offsets in time, phase, frequency, or derivatives thereof, respectively of signals received from the transmission sources relative to a reference source or to each other; (col.18; 9-28, col.13; 16-38, col.14; 54-67) and

(c) means for combining the offsets so determined and calculating the list of offsets relative to the common reference. (col.18; 29-47)

Kelley doesn't teach specifically, means for acquiring data from plural receivers, the positions of which may be known or determined, the data from a receiver being representative of the received signals. However, DUFFETT teaches in an analogous art, that means for acquiring

data from plural receivers, the positions of which may be known or determined, the data from a receiver being representative of the received signals (Pg.11; 10-31).

Regarding claim 10, Kelley disclosed A radio positioning system including apparatus according to claim 8 or to claim 9. (DPLL; col.3; 2-9 & col.5; 12-16)

Regarding claim 11, Kelley disclosed A radio positioning system according to claim 10, wherein the common reference comprises a reference external to said receivers. (external time reference; col.17; 40-50)

Regarding claim 12, Kelley disclosed A radio positioning system according to claim 11, wherein the common reference comprises a GPS signal. (GPS; col.17; 40-50)

Regarding claim 13, Kelley disclosed A radio positioning system according to claim 10, wherein the means for acquiring data from said plural receivers includes a computer system arranged to instigate the transfer of said data from said plural receivers to said computer system at times determined by said computer system. (col.18; 29-47)

Regarding claim 14, Kelley disclosed A radio positioning system according to claim 10, wherein the means for acquiring data from said plural receivers includes a computer system, and including means for instigating said acquisition of data from each said receiver at times determined by each said receiver. (col.18; 29-47)

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kelly & DUFFETT in view of Freeburg et al. (US 6,108,315).

Regarding claim 15, Kelley & DUFFETT disclosed all the particulars of the claim except A digital telephone network. However, Freeburg teaches in an analogous art, that A digital telephone network, including a radio positioning system according to claim 10. (10; fig.1; col.2; 26-32) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include a digital telephone network in order to provide a location information for radio station in such a network.

Response to Amendments & Remarks

IV. Applicant's arguments with respect to claims 1-15 has been fully considered but is moot in view of the new ground(s) of rejection.

Conclusion

V. Applicant's amendment (For illustration; "plural" in independent claims) necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharad Rampuria whose telephone number is (571) 272-7870. The examiner can normally be reached on M-F. (8:30-5 EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on (571) 272-7495. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://portal.uspto.gov/external/portal/pair>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or EBC@uspto.gov.

Sharad Rampuria
Sharad Rampuria
Patent Examiner
Art Unit 2617


GEORGE ENG
SUPERVISORY PATENT EXAMINER